

Amendments to the Claims

Following is a complete listing of the claims pending in the application, as amended:

1-52. (canceled)

53. (currently amended) A method of volumetric ablation of tumorous tissue, comprising:

providing a tissue ablation apparatus comprising an elongated delivery device having a tissue piercing distal end and a proximal end, and at least one RF electrode having a tissue penetrating distal portion, said at least one RF electrode is being pre-shaped to assume a curved shape and define an ablation volume when deployed;

advancing the elongated delivery device to the selected tissue site, wherein said advancing is effective to place the distal end of the delivery device in or adjacent the tumorous tissue;

deploying said at least one RF electrode from the distalmost end of the elongated delivery device;

delivering energy to a selected tissue site through said at least one RF electrode to ablate said tissue;

monitoring a temperature of said tissue using at least one sensor positioned on said at least one RF electrode; and

modulating delivery of said energy when said temperature reaches a predetermined limit.

54. (original) The method of claim 53, wherein at least a portion of the RF electrode includes an insulator, the method further comprising:

utilizing the insulator to define at least a portion of the ablation volume.

55. (original) The method of claim 53 further comprising adjusting, in response to said measured temperature, said energy level to maintain said temperature at a desired value.

56. (previously presented) The method of claim 53, wherein said at least one sensor is positioned at said distal end of said at least one RF electrode.

57. (currently amended) A method of ablating a tissue mass comprising:

positioning in a patient an ablation apparatus comprising an elongated delivery device and a plurality of electrodes that are pre-shaped to assume a curved shape and define an ablation volume when deployed, wherein said positioning is effective to place the distal tip of the delivery device in or adjacent the tissue mass;

deploying said plurality of electrodes from the distalmost end of the elongated delivery device, thus to define an ablation volume that includes the tissue mass;

applying an ablating current to the deployed electrodes, wherein said tissue mass contained within the defined volume is ablated;

monitoring a characteristic of said tissue mass using at least one sensor positioned on at least one of said electrodes as said tissue mass is being ablated; and

controlling the extent of ablation in response to the characteristic detected at said at least one sensor.

58. (previously presented) The method of claim 57 wherein said sensors are positioned at a distal end of said electrodes.

59. (previously presented) The method of claim 71 further comprising adjusting, in response to said monitored characteristic, said energy to maintain said characteristic at a desired value.

60. (previously presented) The method of claim 57 further comprising infusing said tissue with an infusion medium.

61. (original) The method of claim 60, wherein said infusion medium is a chemotherapeutic agent.

62. (original) The method of claim 60, wherein said infusion medium is a conductivity enhancement medium.

63. (canceled)

64. (previously presented) The method of claim 63, wherein at least one of said plurality of electrodes includes a lumen capable of being operatively coupled to an infusion source, and said method further includes infusing a liquid through said electrodes into the defined ablation volume prior to or during said ablating step.

65. (previously presented) The method of claim 59, wherein said energy source is a RF source and said electrode is a RF electrode.

66. (previously presented) The method of claim 65, wherein said electrodes, when deployed, have an electromagnetic energy delivery surface of a size sufficient to create a volumetric ablation without impeding out any one of said deployed electrodes when 5 to 200 watts of electromagnetic energy is delivered.

67. (previously presented) The method of claim 57, wherein said controlling step comprises ceasing said applying of energy in response to said characteristic.

68. (previously presented) The method of claim 57, wherein said controlling step comprises modulating said applying of energy in response to said characteristic.

69. (previously presented) The method of claim 57, wherein said ablation apparatus includes an insulator positioned in a surrounding relationship to at least a portion of one of (i) the elongated delivery device, or (ii) at least one of the plurality of electrodes.

70. (previously presented) The method of claim 69, further including positioning said insulator over at least one of the plurality of electrodes to produce a selectable energy delivery surface.

71. (previously presented) The method of claim 57, wherein said sensor is a thermal sensor and said detected characteristic is temperature.

72. (previously presented) The method of claim 57, wherein said detected characteristic is impedance.

73. (previously presented) The method of claim 57, further including localizing the tissue mass by a process selected from the group consisting of ultrasound, computerized tomography scanning, X-ray, magnetic resonance imaging, and electromagnetic imaging.

74. (new) The method of claim 57, wherein said applying an ablating current comprises applying an RF current.

75. (new) The method of claim 57, wherein said applying an ablating current comprises applying a microwave current.